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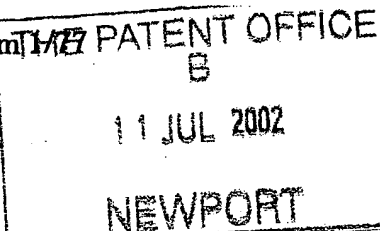
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11 JUL 02 E732408-1 027846

FOI/7700 0.00-0215996.0  
The Patent Office

# Request for grant of a patent

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Cardiff Road  
Newport  
South Wales  
NP9 1RH

1. Your reference

POWERED BEAM GANTRY

2. Patent application number

(The Patent Office will fill in this part)

0215996.0

3. Full name, address and postcode of the or of each applicant (underline all surnames)

AS FIRE & RESCUE EQUIPMENT LTD  
118 COMMERCIAL ROAD  
TOTTON  
SOUTHAMPTON SO40 3ZD

Patents ADP number (if you know it)

If the applicant is a corporate body, give the country/state of its incorporation

0714162001

ENGLAND

4. Title of the invention

POWERED MOVEABLE STOWAGE

5. Name of your agent (if you have one)

NONE

"Address for service" in the United Kingdom to which all correspondence should be sent (including the postcode)

AS FIRE & RESCUE EQUIPMENT LTD  
118 COMMERCIAL ROAD  
TOTTON  
SOUTHAMPTON SO40 3ZD

0714162001

Patents ADP number (if you know it)

6. If you are declaring priority from one or more earlier patent applications, give the country and the date of filing of the or of each of these earlier applications and (if you know it) the or each application number

Country Priority application number Date of filing  
(if you know it) (day / month / year)

7. If this application is divided or otherwise derived from an earlier UK application, give the number and the filing date of the earlier application

Number of earlier application Date of filing  
(day / month / year)

8. Is a statement of inventorship and of right to grant of a patent required in support of this request? (Answer 'Yes' if:

- a) any applicant named in part 3 is not an inventor, or
  - b) there is an inventor who is not named as an applicant, or
  - c) any named applicant is a corporate body.
- See note (d))

YES

# Patents Form 1/77

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## Continuation sheets of this form

Description	3
Claim(s)	2
Abstract	1
Drawing(s)	1

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## Priority documents

Translations of priority documents

Statement of inventorship and right to grant of a patent (Patents Form 7/77) 1

Request for preliminary examination and search (Patents Form 9/77)

Request for substantive examination (Patents Form 10/77)

Any other documents (please specify)

11.

I/We request the grant of a patent on the basis of this application.

Signature

Date 10 Jul 2002

12. Name and daytime telephone number of person to contact in the United Kingdom

Mr I T WEEKS

023 8086 1966

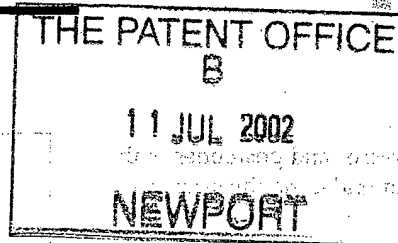
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**Statement of inventorship and of  
right to grant of a patent**



The Patent Office  
Cardiff Road  
Newport  
South Wales  
NP9 1RH

1. Your reference

POWERED BEAM GANTRY

2. Patent application number  
(if you know it)

GB 0204060.8

3. Full name of the or of each applicant

AS FIRE & RESCUE EQUIPMENT LTD

4. Title of the invention

POWERED MOVEABLE STOWAGE

5. State how the applicant(s) derived the right  
from the inventor(s) to be granted a patent

EMPLOYMENT CONTRACT/ASSIGNMENT

6. How many, if any, additional Patents Forms  
7/77 are attached to this form?  
(see note (c))

NONE

7. I/We believe that the person(s) named over the page (and on  
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which the above patent application relates to.

Signature

*[Handwritten Signature]*

Date 10.7.2002

8. Name and daytime telephone number of  
person to contact in the United Kingdom

Mr I T WEEKS

023 8086 1966

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Enter the full names, addresses and postcodes of the inventors in the boxes and underline the surnames

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HAMPSHIRE  
SO45 1FZ  
ENGLAND

7939317001

Patents ADP number (if you know it):

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Reminder

Have you signed the form?

This invention relates to the stowage of equipment such as ladders on the top of vehicles and in particular with a means by which these items can be conveniently loaded and unloaded in a controlled manner by an operator standing on the ground.

5        Fire brigades commonly carry ladders and other equipment on top of their vehicles. Health and safety requirements now necessitate that these items are accessed from ground level and manual handling limits restrict the amount of effort available from the operators. Existing systems designed to meet this requirement utilise the operators to provide the  
10        motive force required to move the stowage and the item upon it. Various means are also used to control the movements during the transition from the horizontal stowed state to the near vertical access position. Such systems have the disadvantage of requiring the operators to provide the motive power and thereby increasing the number of operators required as  
15        well as restricting the scope of permitted operation.

An object of this invention is to provide a roof top stowage that is operable from ground level and is powered throughout its movement and that of the stowed item upon it whilst requiring minimal input from a single operator.

20        According to this invention there is provided a moveable stowage on top of a vehicle comprising a longitudinal member, means for releasably securing the longitudinal member in the stowed position, the longitudinal member being adapted to travel over a base member that is pivotally mounted on the vehicle so as to move the longitudinal member from a  
25        substantially horizontal stowed position to an angular access position, and upon said longitudinal member a moveable attachment for connecting the stowed item to the longitudinal member such that the stowed item can be moved on to and off the longitudinal member, all movements being caused and controlled by powered means.

30        A specific embodiment of this invention will now be described by way of example only and with reference to the accompanying drawings of which:-

Figure 1 is a diagrammatic view showing the stowage in the stowed position, the stowage being viewed from a location displaced to the right of the stowage.

Figure 2 is a view similar to figure 1 illustrating the stowage in the  
5 access position.

A vehicle such as a fire tender used by the fire brigades has on its top a moveable stowage for a ladder. A moveable stowage comprising a longitudinal member 10, means (not shown) for releasably securing the longitudinal member 10 in the stowed position shown in fig 1. Mounted on  
10 the longitudinal member 10 a closed loop transmission means 11 driven by a motive force 12 and tensioned and returned by a returning means 13. An attachment means 14 by which the stowed item 15 is attached to the stowage, forms part of the transmission means 11 whereby the stowed item 15 may be propelled back and forth along the longitudinal member 10 using  
15 guide means (not shown). The longitudinal member 10 being adapted to move back and forth on a second guide means (not shown), to and from a stowed position (see fig. 1) on a base member 16 pivotally attached to a mounting 17 allowing it to pivot to an access position as shown in fig. 2. The longitudinal member 10 also comprising a linear second transmission  
20 means 18 that is powered by a second motive force 19 such that the longitudinal member 10 can be propelled in its movements on the base member 16. Attached to the base member 16 and also to a second mounting 20 a third motive force 21 exerts forces to the base member 16 off set to the pivot causing it to pivot about the mounting 17 to and from the  
25 stowage position shown in fig 2. A control system (not shown) consisting of a number of sensors (not shown) that sense the ends of the movements and ensures their operation in the correct order and for the necessary duration. The sequence of events being that the latch (not shown) retaining the longitudinal member 10 is released and the motive force 19 propels by  
30 the linear transmission means 18 the longitudinal member 10 along the base member 16 away from the stowed position shown in fig 1 to a pre-set position. The third motive force 21 then exerts a force between the base member 16 and the second mounting 20 pivoting the base member 16

about the mounting 17 until the access position shown in fig 2 is reached. The motive force 12 then exerts a force via the closed loop transmission means 11 around the returning means 13 causing the attachment means 14 together with the stowed item 15 to traverse the longitudinal member 10 to the access position shown in fig2. Transition from the access position shown in fig 1 to the stowed position shown in fig 2 is achieved by the motive force 12 exerting a force causing the attachment means 14 together with the stowed item 15 to traverse the longitudinal member 10 to the stowage position on the longitudinal member 10 shown in fig 2. The third motive force 21 then exerts a force between the base member 16 and the second mounting 20 pivoting the base member 16 about the mounting 17 until the substantially horizontal stowage position of the base member 16 shown in fig 2 is reached. Then the motive force 19 propels the linear second transmission means 18 thereby moving the longitudinal member 10 along guide means (not shown) on the base member 16 away from the pre-set position shown in fig 2 to the stowed position shown in fig 1.



**CLAIMS**

1. A moveable stowage on top of a vehicle comprising a longitudinal member upon which is mounted an attachment means for connecting the  
5 stowed item, the attachment means being adapted to travel along the longitudinal member and being moveable by powered means between a stowed position and an access position, the longitudinal member being adapted to travel over a base member that is secured pivotally to the vehicle, the longitudinal member being moveable over the base member by  
10 powered means between a stowed position and an access position, means for releasably securing the longitudinal member in the stowed position and stop means to hold the longitudinal member in an access position on the base member, a powered means for pivotally moving the base member between a substantially horizontal stowed position and an angular access  
15 position approaching the vertical and stop means for holding the base member in an access position.
2. A moveable stowage as claimed in Claim 1, wherein the powered means on the longitudinal member to which the stowed item is attached is  
20 in the form of a closed loop formed by but not limited to a belt or a chain running around a pair of sprockets at least one of which is power driven.
3. A moveable stowage as claimed in Claim 1 or 2, wherein the powered means moving the longitudinal member over the Base member is  
25 in the form of but not limited to a single belt or a chain running around a sprocket which is power driven.
4. A moveable stowage assembly as claimed in any of Claims 1 to 3, wherein the force pivoting the base member is provided by but not limited to  
30 a liner acting cylinder or actuator.

5. A moveable stowage assembly as claimed in any of Claims 1 to 4, wherein the motive power is provided by hydraulic, electric or pneumatic means
- 5 6. A moveable stowage assembly as claimed in any of Claims 1 to 5, wherein sensors are used connected to a control system to sequence and regulate the movements of the stowage.
7. A moveable stowage substantially as described herein with reference to  
10 figures 1 and 2 of the accompanying drawings.

## ABSTRACT

### POWERED MOVABLE STOWAGE

A vehicle has on its top a moveable stowage comprising a longitudinal member 10 on which is Mounted a transmission means 11 driven by a motive force 12 and an attachment means 14 by which the stowed item 15 is attached to and moved on to and off the stowage, the longitudinal member 10, propelled by a second transmission means 18 powered by a second motive force 19, moves on a base member 16 that is pivotally attached to a mounting 17, a third motive force 21 causing the base member 16 to pivot about the mounting 17 the total combined movements transporting the stowed item to and from the access position shown to and from a stowage position on top of the vehicle.

(Use figure 2.)

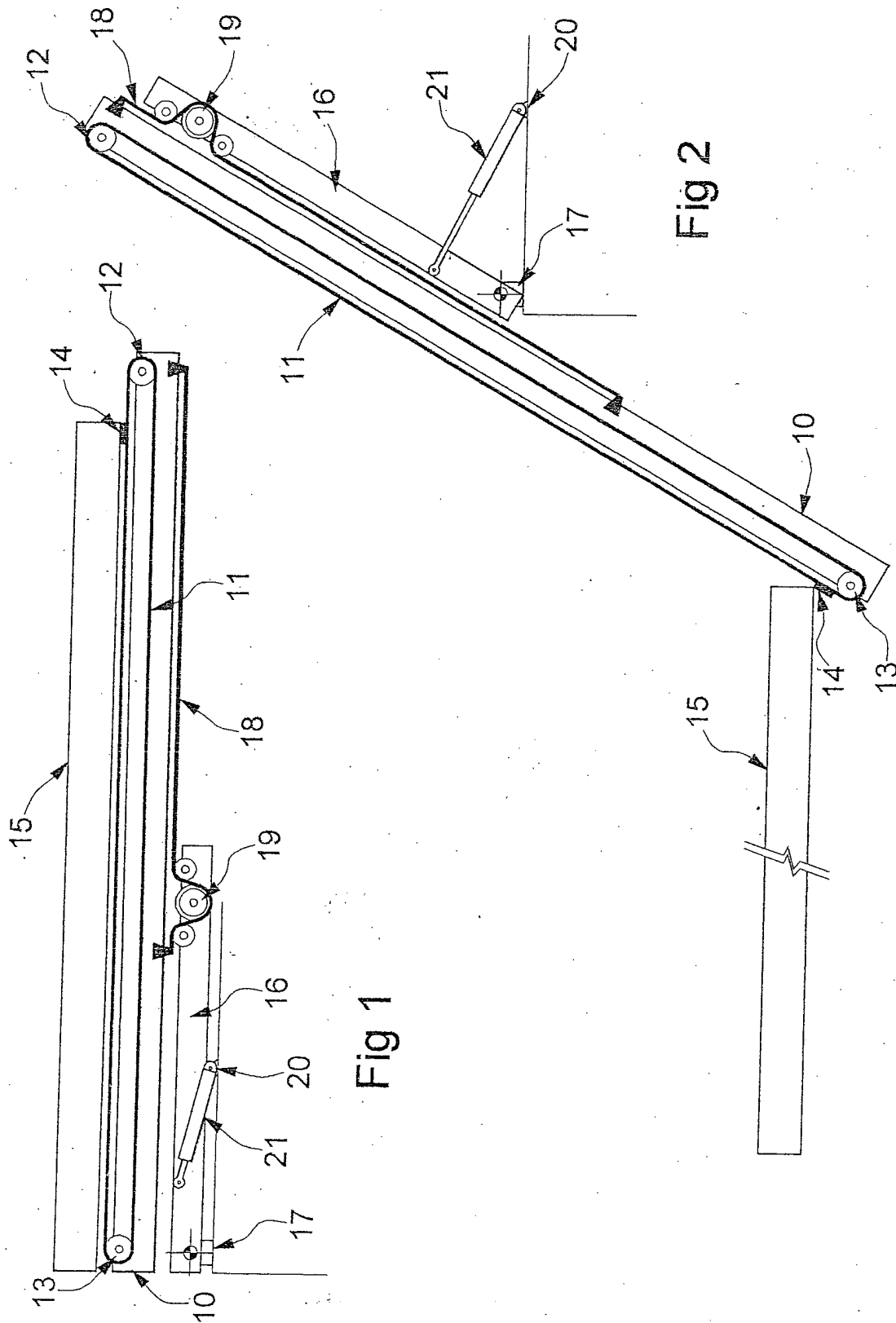


Fig 2

Fig 1

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